

Lane Construction  
Waldo County  
Belfast, Maine  
A-54-71-H-A (SM)

Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #1

After review of the air emission license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

A. Introduction

Lane Construction (Lane), located in Belfast, was issued air emission license A-54-71-G-N on August 30, 1999, permitting the operation of their hot mix asphalt plant and their crushed stone and gravel facility.

Lane has requested a minor modification to add two generators to the license, add one secondary rock crusher to the license, increase the fuel usage for the generators from 30,000 gallons per year to 60,000 gallons per year, and change facility wide fuel sulfur content to 0.35% by weight.

B. Revised Emission Equipment

**Rock Crushers:**

<u>Designation</u>	<u>Process Rate (tons/hour)</u>	<u>Control Device</u>	<u>Date of Manufacture</u>
Primary	175	Spray Nozzles	Pre 1983
Secondary*	125	Spray Nozzle	1986
Secondary*	125	Spray Nozzle	1988
<b>Secondary 425</b>	150	Spray Nozzle	1965

\*Initial performance test performed September 30, 1999.

**Bold** depicts new unit.

**Other Fuel Burning Equipment**

<u>Equipment</u>	<u>Date of Construction</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>
Heater H1	1999	2.1	15	#2 fuel oil, 0.35%S	H1
<b>Genset 3412</b>	1998	3.84	28	Diesel Fuel, 0.35%S	G1
<b>Diesel N14PA</b>	1998	1.21	8.6	Diesel Fuel, 0.35%S	D1

\***Bold** depicts new unit.

C. Application Classification

The application for Lane includes the licensing of new units and increased emissions, therefore the license is considered to be a minor modification.

**II. BEST PRACTICAL TREATMENT**

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

A. New Secondary Rock Crusher 425

The new secondary rock crusher is a portable unit manufactured in 1965 with a rated capacity of 150 tons/hour. EPA NSPS Subpart OOO for Nonmetallic Mineral Processing Plants applies to fixed rock crushers with capacities greater than 25 tons/hr and portable rock crushers with capacities greater than 150 tons/hr, constructed after August 31, 1983. Therefore, the new secondary rock crusher is not subject to NSPS Subparts A and OOO.

The regulated pollutant from the new rock crusher is particulate emissions. To meet the requirements of BPT for control of PM emissions from the new rock crusher, Lane shall operate and maintain water sprays on the new rock crusher as needed. Visible emissions from the new rock crusher shall be limited to no greater than 10% opacity on a six (6) minute block average basis.

B. Existing Primary Rock Crusher

The existing primary rock crusher was manufactured prior to 1973 with a rated capacity of 175 tons/hr. Although the unit was manufactured prior to 1983, to comply with EPA NSPS Subpart OOO for Nonmetallic Mineral Processing Plants, Lane must perform an initial performance test on the primary rock crusher per the applicable sections of 40 CFR Part 60, Subpart OOO, §60.675.

C. Diesel Units

Genset 3412 has an approximate power rating of 548 HP based on a heat input of 3.84 MMBtu/hr, and Diesel N14PA has an approximate power rating of 173 HP based on a heat input of 1.21 MMBtu/hr; each based on 35% efficiency. BACT for the new diesel units is the following:

1. Total annual diesel fuel use in the diesels is limited to 60,000 gallons.

2. Chapter 106 regulates fuel sulfur content, however the use of 0.35% sulfur by weight fuel is more stringent and shall be used.
3. SO<sub>2</sub> emission data was based on fuel sulfur mass balance.
4. NO<sub>x</sub>, CO and VOC emission limits are based upon AP-42 data dated 10/96 for diesel engines less than 600 horsepower.
5. PM and PM<sub>10</sub> emission rates were based upon BACT of 0.12 #/MMBtu.
6. Opacity from each diesel unit shall not exceed 20% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.

D. General Process Emissions

Visible emissions from a general process (including conveyor belts) shall not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

E. Revised Facility Emissions

- 720,000 gallons per year of #2 fuel oil (0.35% sulfur by weight maximum) or specification waste oil (0.7% sulfur by weight maximum) in the rotary dryer.
- 30,000 gallons per year of #2 fuel oil in Heater H1, 0.35% sulfur by weight maximum.
- 60,000 gallons per year of #2 fuel oil in the diesel units (combined), 0.35% sulfur by weight maximum.  
(all based on a 12 month rolling total)

**Total Annual Emissions for the Facility**  
(used to calculate the annual license fee)

Pollutant	Asphalt Plant	Heater	Generators	Total Tons/year
PM	6.7	0.1	0.5	7.3
PM <sub>10</sub>	6.7	0.1	0.5	7.3
SO <sub>2</sub> *	35.5	0.8	1.5	37.8
NO <sub>x</sub>	27.9	0.3	18.3	46.5
CO	93.0	0.1	3.9	97.0
VOC	1.9	0.1	1.4	3.4

\*Asphalt Plant SO<sub>2</sub> TPY based on firing 0.7% specification waste oil.

### **III. AMBIENT AIR QUALITY ANALYSIS**

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Based on the above total facility emissions, Lane is below the emissions level required for modeling and monitoring.

#### **ORDER**

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

will receive Best Practical Treatment,  
will not violate applicable emission standards,  
will not violate applicable ambient air quality standards in  
conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-54-71-H-A, subject to the conditions in license A-54-71-G-N in addition to the following conditions:

#### **The following shall replace Condition (17)(G) of Air Emission License A-54-71-G-N:**

##### **(16) Asphalt Plant**

G. The asphalt rotary dryer shall be limited to a maximum of 39.0 MMBtu/hr heat input. Lane shall be limited to the use of 720,000 gal/year of #2 fuel oil (0.35% sulfur by weight maximum) and specification waste oil (0.7% sulfur by weight maximum) (12 month rolling total) in the rotary dryer. Emissions from the baghouse shall not exceed the following:

<u>Pollutant</u>	<u>grs/dscf</u>	<u>lb/hr</u>
PM	0.03	5.16
PM <sub>10</sub>	n/a	5.16
SO <sub>2</sub> *	n/a	27.50
NO <sub>x</sub>	n/a	21.60
CO	n/a	72.0
VOC	n/a	1.48

\*SO<sub>2</sub> emissions based on 0.7% sulfur specification waste oil.

#### **The following shall replace Condition (17) of Air Emission License A-54-71-G-N:**

##### **(17) Rock Crushers**

- A. Lane shall maintain spray nozzles for particulate control on the primary and secondary rock crushers and operate them as necessary to limit visible emissions to no greater than 10% opacity on a six (6) minute block average basis. [MEDEP Chapters 115 (BPT) and 101]
- B. Lane shall maintain a log detailing the maintenance on the water spray nozzles. The maintenance log shall be kept on-site at the rock crushing location. [MEDEP Chapter 115, BPT]

- C. Lane shall maintain a log detailing and quantifying the hours of operation on a daily basis for the primary and secondary rock crushers. The operation log shall be kept on-site at the rock crushing location. [MEDEP Chapter 115, BPT]
- D. The new secondary crusher shall not be attached or clamped via cable, chain, turnbuckle, bolt, or other means (except electrical connections) to any anchor, slab, or structure (including bedrock) that must be removed prior to transportation. [MEDEP Chapter 115, BPT]
- E. Lane shall have an initial performance test performed on the existing primary rock crusher per the applicable sections of 40 CFR Part 60, Subpart OOO, §60.675. The performance test shall be completed within 60 days after achieving the maximum production rate during the 2004 season, but no later than 180 days after initial startup of the unit for the 2004 season. Lane shall submit a test notice to the regional inspector at least 30 days prior to the performance test. Any rescheduled test requires a seven (7) day notice to the regional inspector. [MEDEP Chapter 115 BPT/BACT, 40 CFR Part 60, Subpart OOO]

**The following shall replace Condition (20) of Air Emission License A-54-71-G-N:**

**(20) Stockpiles and Roadways**

Visible emissions from a fugitive emission source shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour. [MEDEP Chapter 101]

**The following are new conditions:**

**(24) Diesel Units**

- A. Combined fuel use in Genset 3412 and Diesel N14PA shall not exceed 60,000 gal/year of diesel fuel (12 month rolling total), with a sulfur content not to exceed 0.35% by weight. Fuel use records and receipts (showing the quantity and percent sulfur of the fuel) for the diesel engines shall be maintained to demonstrate compliance. [MEDEP Chapter 115, BACT]

- B. Emissions from Genset 3412 shall be limited to the following [MEDEP Chapter 103 and Chapter 115, BPT]:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.12	0.46
PM <sub>10</sub>	n/a	0.46
SO <sub>2</sub>	n/a	1.37
NO <sub>x</sub>	n/a	16.93
CO	n/a	3.65
VOC	n/a	1.34

- C. Emissions from Diesel N14PA shall be limited to the following [MEDEP Chapter 115, BACT]:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.15
PM <sub>10</sub>	0.15
SO <sub>2</sub>	0.43
NO <sub>x</sub>	5.34
CO	1.15
VOC	0.42

- D. Visible emissions from each diesel unit shall not exceed 20% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.  
[MEDEP Chapter 101]

(25) **General Process Sources**

Visible emissions from any general process source shall (including conveyor belts) not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.  
[MEDEP Chapter 101 and Chapter 115, BPT]

- (26) Lane shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).

Lane Construction  
Waldo County  
Belfast, Maine  
A-54-71-H-A

7

**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #1**

**(27) Payment of Fees**

Lane shall pay the annual air emission license fee within 30 days of **May 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3. [38 MRSA §353-A]

DONE AND DATED IN AUGUSTA, MAINE THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-54-71-G-N.**

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 18, 2003

Date of application acceptance: January 22, 2004

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This order prepared by Mark E. Roberts, Bureau of Air Quality.